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PLANTAE NOVAE AFRICANAE.

“ Ex Africa semper aliquid novi.”—*Pliny*.

SERIES V.

By

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***Oxalis lineolata***, Salter (Oxalidaceae), § Tripartitae (Lineares).

*Planta* parva, caule exserto, 5—8 cm. alta. *Bulbus* elongatus, distortus, valde attenuatus, 3—4.5 cm. longus, tunicis numerosis laxis acutissimis, retrorse brunneo-velutinis, exterioribus saepe diffisis et ligulatis. *Rhizoma* 8—10 cm. longum, gracile, breviter glanduloso-pilosum, squamis paucis, parvis, semiamplexicaulibus, membranaceis instructum. *Caulis* 1—5 cm. longus, pilis brevibus capitatis sparsissime pilosus, atro-viridis, squamis 2—6, ovatis cuspidatis brunneis indutus. *Folia* 10—20, caulis apice conferta, petiolis 0.5—1.5 cm. longis, minute sparseque glanduloso-pilosis: foliola 3, sessilia, linearia vel anguste lineari-cuneata, involuta vel conduplicativa, falcata, emarginata, 4—9 mm. longa, glabra, striis elongatis pellucidis (in sicco atris) ornata. *Pedunculi* uniflori, satis numerosi, apicales, 1.5—2 cm. longi, vel e squamis superioribus caulinis exorientes, paulo longiores, glabri, prope apicem bibracteati bracteis minutis subulatis alternantibus callosis, 1.5 mm. longis. *Sepala* late lanceolata vel ovato-lanceolata, glabra, lineis pellucidis (in sicco atris) longitudinaliter striata, ad marginem saepe violaceo-membranacea, ecallosa. *Corolla* 1.0—1.6 cm. longa, tubo infundibuliforme luteo: petala subadscendentia, oblique cuneato-spathulata, apice rotundata, longitudinaliter concava, ad 3.5 mm. lata, superne ad marginem lineis paucis brunneis notata. *Filamenta* (parte connata inclusa) exteriora 2—3.5 mm., glabra, interiora 3—5 mm. longa, margine exteriori sparse glanduloso-pilosa, leviter gibbosa. *Ovarium* oblongum 1.5—1.7 mm. longum, in dimidio superiore pubescens, callis numerosis atris notatum, stylis inferne pubescentibus, superne glanduloso-pilosis. *Capsula* ovato-oblonga, loculis 3-ovulatis.

*Hab.* Cape Province: Clanwilliam Div.; near Doornbosch in dry shale flats, flowers May-June, *Salter* 5382 (*type* in Bolus Herbarium), 4442, 4548, 5384.

An affinity of *O. Burkei*, Sond., but a much smaller plant, also differing in having narrow concavely channelled petals which taper cuneately to the base, without an obvious claw, and a distorted bulb with loose retrorsely velvety tunics. It is also nearly related to *O. Robinsonii*, Salter and Exell, particularly in the shape of the petals, but the arrangement of the leaves brings in into a different section. (V.V.S., V.V.C.)

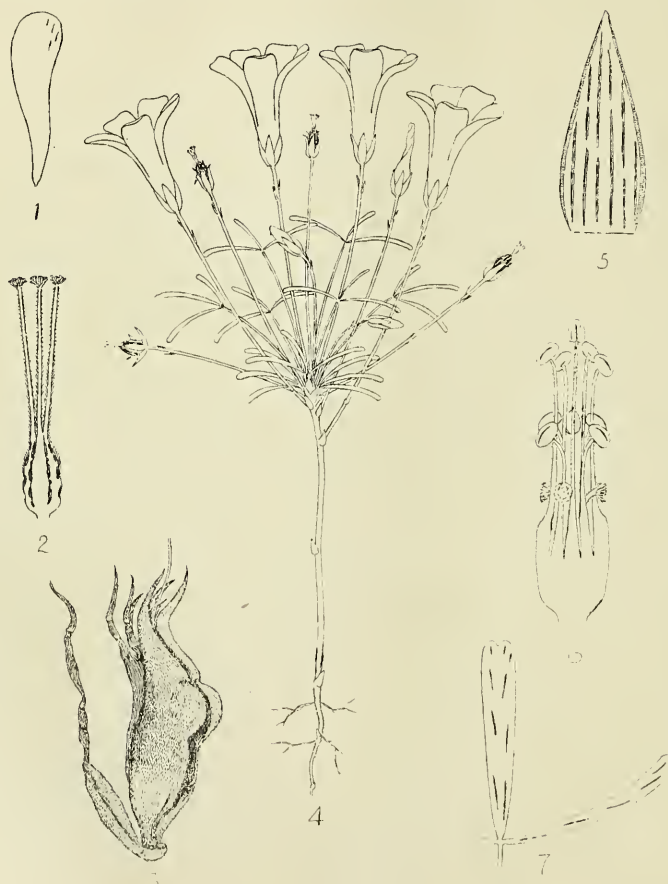


FIG. 1. *Oxalis lincolata* Salter. 1. Petal  $\times 2$ . 2. Gynoecium  $\times 8$ . 3. Bulb, natural size. 4. Plant  $\times 1\frac{1}{2}$ . 5. Sepal (dried)  $\times 10$ . 6. Androecium  $\times 8$ . 7. Leaf (dried)  $\times 5$ . (Salter 5382.) Del. T. M. Salter.

**Oxalis Massoniana**, Salter (Oxalidaceae), § Sessilifoliatae.

*Planta* parva erecta, caule exserto, 4—6 cm. (in umbrosis ad 24 cm.) alta. *Bulbi* valde congesti, saepe 2 cm. longi, seniores annorum praeteritorum in serie submoniliforme persistentes: tunicae tenues vel vix papyraceae, retrorse pilosae, interiores lanceolatae, acutissimae, nitentes, brunneae, exteriores lineares vel angustissime lamellatae, crebre plicatae, atro-brunneae. *Partes herbaceae* pilis adscendentibus canis pilosae. *Caulis* simplex, 2—4 cm. longus, ruber, ad basin squamis paucis indutus, superne dense foliatus. *Folia* imbricantia, superiora subsessilia, inferiora breviter petiolata petiolis squamiformibus striatis 0.5—1 mm. longis: foliola 3, linearia, obtusa, marginibus involutis, interdum conduplicativa, circa 5 mm. longa, 1 mm. lata, supra glabra, infra pilosa, lineis parvis pellucidis (in sicco atris) striata. *Pedunculi* uniflori, e foliorum axillis exorientes, graciles, ad basin articulati, 2—3 cm. longi, rubro-brunnei, in parte superiore bibracteati bracteis subulatis striatis pubescentibus, 2—3 mm. longis. *Sepala* late lanceolata, 4—5 mm. longa, ciliata, rubescentia, lineis pellucidis (in sicco atris) striata. *Corolla* 1.6—1.8 cm. longa tubo infundibuliforme, cum faucibus, luteo: petala cuneato-obovata, ad basin leviter attenuata, antice rotundata, 7—9 mm. lata, in parte superiore ( $\frac{1}{3}$ ) rubro-miniata, in parte inferiore ( $\frac{2}{3}$ ) lutea, ad marginem exteriorem sparse pubescentia et lineis (in sicco) atris notata. *Filamenta* (parte connata inclusa) exteriora 1.8—3 mm., interiora 3—6 mm. longa, ad apicem sparsissime glandulosa, vix gibbosa. *Ovarium* ovoideo-oblongum, 1.5—2 mm. longum, glabrum vel in parte superiore pubescens, loculis 1-ovulatis, callis numerosis ornatum. stylis sparse pubescentibus, pilisque paucis capitatis admixtis.

Var. *β. flavescens*. *Planta* robustior, saepe e basi bi-ramosa. *Pedunculi* numerosi. *Corolla* pallide flavo-straminea, ad marginem exteriorem conspicue atro-lineata et purpureo-maculata. *Ovarium* loculis 2—3-ovulatis.

*Hab.* Cape Province: Calvinia Div.; summit of Van Rhyn's Pass in damp muddy shallow sandy soil overlying flat rock, flowers May, *Salter* 705 (*type*) 1607 cult., 2144, 5360, *Pillans* 6644; *β.* 7 miles east of Nieuwoudtville, in hard clayey soil, May, *Salter* 4474 (*type*); 7 miles north of Nieuwoudtville, June, *Salter* 4566. Both types are in the Bolus Herbarium.

This species is perhaps the most strikingly handsome of all the South African *Oxalis*, and I have named it in honour of Francis Masson, who first collected and sent to Banks a flowerless specimen (now in the Brit. Mus.) of the *Oxalis* which now bears my own name (*O. Salteri*, L. Bolus in Journ. of Bot., lxvii (1930), p. 75).

Its nearest affinity is *O. pardalis*, Sond., from which it may be distinguished by its canous indument which gives the leaves a glaucous appearance, the brick-red-tipped petals and remarkable bulbs. The dark brown linear plicate tunics which enclose them can best be likened

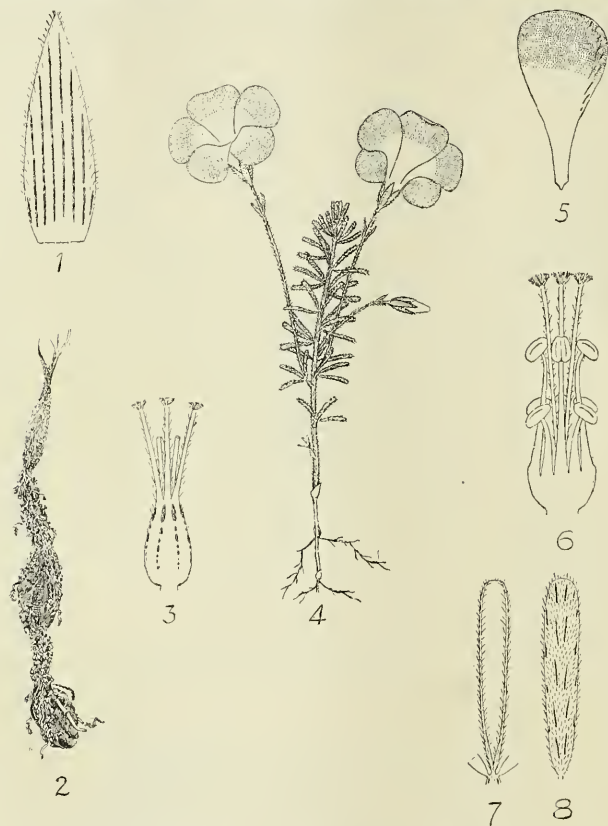


FIG. 2. *Oxalis Massoniana* Salter. 1. Sepal (dried)  $\times 8$ . 2. Bulb, natural size. 3. Gynaecium  $\times 8$ . 4. Plant, natural size. 5. Petal  $\times 1\frac{1}{2}$ . 6. Androecium  $\times 8$ . 7. Leaflet upper surface  $\times 5$ . 8. Leaflet flattened out, under surface (dried)  $\times 5$ . (Salter 5360.) Del. T. M. Salter.

to the brown "crinkled" packing sometimes used in boxes of expensive chocolates. The plants often grow in small compact tufts with as many as twenty flowers in bloom at the same time: in shaded positions, or where drawn up by surrounding vegetation, the stem is much elongated.

The extension of the yellow colour of the tube well into the lamina of the petal is a very rare feature in the genus in S. Africa and is only known in one other species, viz. *O. Pageae*, L. Bolus.

The corolla is var.  $\beta$  is pale yellow with a very faint tinge of orange. (v.v.s., v.v.c.)

***Oxalis melanograpta***, Salter (Oxalidaceae), § Sessilifoliae.

*Planta* parva, 2—4 cm. alta, caule foliato exserto. *Bulbus* anguste ovoideus (cum tunicis) saepe 2.5 cm. longus, tunicis numerosis laxè obtectus: tunicae lanceolatae vel ligulatae, apice attenuato-aciculares, nitescentes, brunneae, exteriores pilis brunneis retrorsis inconspicue pilosae. *Rhizoma* 5—8 cm. longum, pilosum, squamis semiamplexicaulibus indutum. *Caulis* ad 2.5 cm. longus, glaber vel ad basin pubescens, in dimidio inferiore squamis 1—4 instructus, superne dense foliatus. *Folia* numerosa, in caulis dimidio superiore conferta, imbricantia, erecto-patentia, petiolis subsquamiformibus 0.5—1 mm. longis: foliola 3, brevissime petiolulata, linearia, conduplicativa vel involuta, saepe falcata, emarginata, 3—7 mm. longa, 0.6—1.2 mm. lata, glabra, infra lineis brevibus numerosis pellucidis (in sicco atris) notata. *Pedunculi* 3—14, uniflori, e foliorum vel rare squamorum axillis exorientes, ad basin articulati, sparse minuteque glanduloso-pilosi, rubro-brunnei, paulo infra calycem bibracteati bracteis suboppositis lanceolatis carinatis rube-scentibus, ad 3 mm. longis, sparse glanduloso-ciliatis, sicut foliola lineatis. *Sepala* anguste ovata vel ovato-lanceolata, 2.5—3 mm. longa, in dimidio superiore inconspicue glanduloso-ciliata, lineis pellucidis (in sicco atris) longitudinaliter striata. *Corolla* 1—1.4 cm. longa, rubro-rosea, tubo breve late infundibuliforme luteo: petala cuneato-obovata, ad basin leviter attenuata, antice saepe subtruncata, 5—8 mm. lata, ad marginem exteriorem lineis atris vel brunneis ornata. *Filamenta* (parte connata inclusa) exteriora 2—3.5 mm., glabra, interiora 3.5—7 mm. longa, margine exteriori glandulosa, vix gibbosa, longissima e corollae tubo valde exserta. *Ovarium* ovoideo-oblongum, 1.5 mm. longum, ad apicem sparsissime pilosum, callis numerosis atro-brunneis (in vita pellucidis?) notatum, stylis inferne glabris, superne minute glandulosis. *Capsula* globosa, loculis 2—3-ovulatis.

*Hab.* Cape Province: Van Rhyn's Dorp Div.; 18 miles north-east of Van Rhyn's Dorp, in shale on a low kopje, flowers May-June, *Salter* 714 (*type* in Bolus Herbarium) 2491, 5322, *Pillans* 6664.

A close affinity of *O. pardalis*, Sond., but having a shorter and wider corolla tube from which the longest stamens (or styles) are well exserted and not enclosed within the tube as is *O. pardalis*. The ovary is practically glabrous and the styles are only very minutely glandular-pilose



on the upper half, whereas in *O. pardalis* both these organs are uniformly coated with simple hairs.

Although fairly plentiful in one small area it is apparently very local, for I have searched for it without success on many similar kopjes in the neighbourhood.

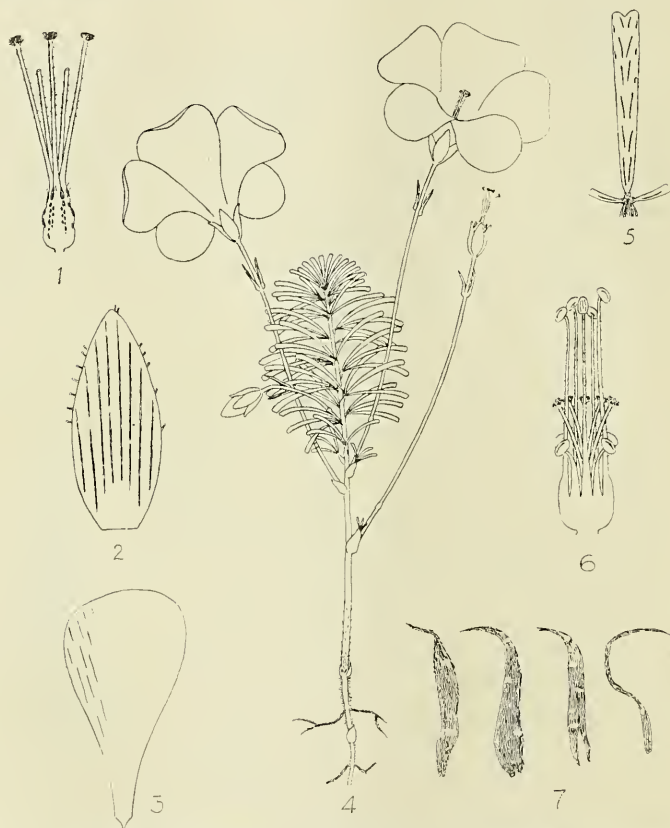


FIG. 3. *Oxalis melanograptia* Salter. 1. Gynaeceum  $\times 6$ . 2. Sepal  $\times 12$ . 3. Petal  $\times 3$ . 4. Plant  $\times 2$ . 5. Leaflet (dried)  $\times 4$ . 6. Androeceum  $\times 6$ . 7. Bulb scales, natural size. (Salter 5322.) Del. T. M. Salter.

***Oxalis heidelbergensis*, Salter (Oxalidaceae), § Sessilifoliatae.**

*Planta erecta robusta, saepe caespitulosa, omnino glabra, caule foliato exserto, 15—25 cm. alta. Bulbi subuloidei, saepe congesti, ad 4 cm. longi: tunicae tortuose lanceolatae, longe attenuatae, acutis-*

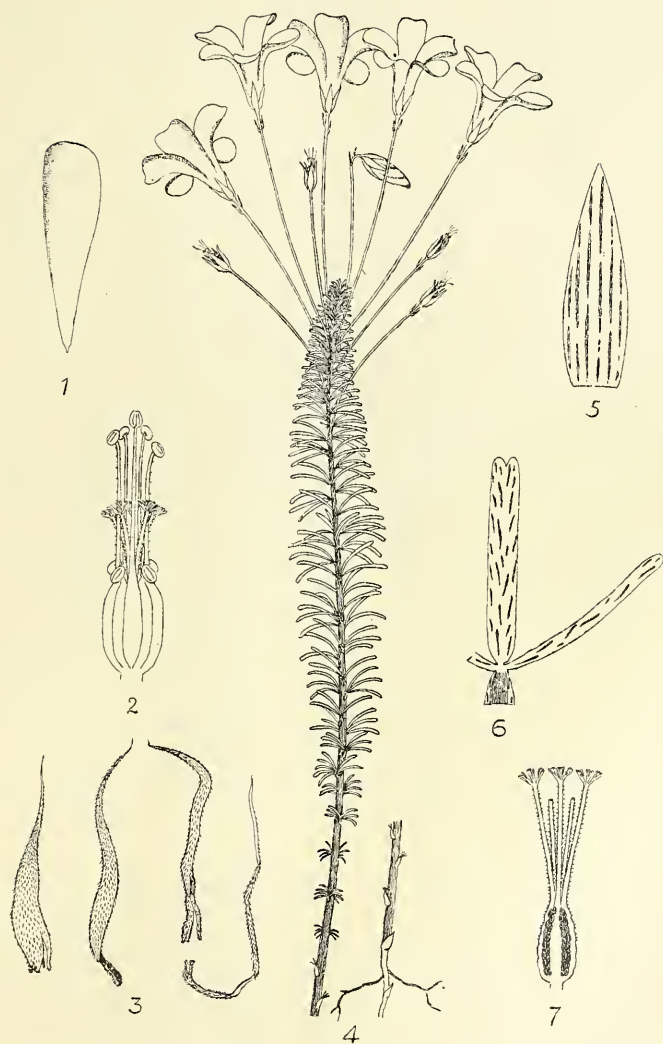


FIG. 4. *Oxalis heidelbergensis* Salter. 1. Petal  $\times 2$ . 2. Androecium  $\times 6$ . 3. Bulb scales, natural size. 4. Plant, natural size. 5. Sepal (dried)  $\times 8$ . 6. Leaf (dried)  $\times 4$ . 7. Gynaecium  $\times 6$ . (Salter 2385.) Del. T. M. Salter.

simae, exteriores diffindentes, itaque lineares vel ligulatae, valde tortuosae, tegimen laxum pseudo-fibrosum formantes. *Rhizoma* 10—15 cm. longum, squamis paucis indutum. *Caulis* subligneus, interdum inferne sparse ramosus, ad basin squamis vel foliis abortivis instructus. *Folia* numerosa, subsessilia, infima subfasciculata, cetera imbricata, reflexa, petiolis squamiformibus, 1—2 mm. longis: foliola 3, sessilia, linearia, involuta vel conduplicativa, falcata, emarginata, 4—8 mm. longa, 0.6—1 mm. lata, striis parvis linearibus atris (in vita pellucidis) conspicue notata. *Pedunculi* uniflori, numerosi, subaequales, graciles, adscendentes, in caulis ramorumque parte superiore ex foliorum axillis exorientes, 3—4 cm. longi, ad basin manifeste articulati, rubro-brunnei: bracteae 2, alternantes vel suboppositae, lineari-lanceolatae, paulo infra calycem positae. *Sepala* late lanceolata, 4—5 mm. longa, lineis brunneis vel atris (in vita pellucidis) longitudinaliter striata. *Corolla* 1.5—1.7 cm. longa, alba, tubo infundibuliforme luteo: petala anguste cuneata, longitudinaliter concava, antice leviter truncata, 4—4.5 mm. lata, ad marginem exteriorem inferiorem rubra. *Filamenta* (parte connata inclusa), exteriora 1.5—3 mm., glabra, interiora 3—6 mm. longa, minute sparseque glandulosa, edentata. *Ovarium* ovoideo-oblongum, ad 2 mm. longum, loculis 4—6 ovulatis, in dimidio superiore glanduloso-pilosum, callis atris (in vita pellucidis) inter angulos obsitum, stylis glandulosis.

*Hab.* Cape Province: Swellendam Div.: 8 miles west of Heidelberg, flowers June, *Salter* 2385 (*type* in Bolus Herbarium).

An affinity of *O. confertifolia* O. Kuntze (R. Knuth) and *O. Robinsonii*, *Salter* and *Exell*, with both of which I have been able to observe it in cultivation. It differs from the former in having smaller, white flowers, spathulate or narrow cuneate petals without a distinct claw, an ovary almost completely covered with calli and shorter stigmas; from the latter in having all the leaves subsessile and somewhat reflexed, shorter peduncles and narrower petals. It has produced self-sown flowering seedlings in cultivation.

#### ***Oxalis grammophylla*, *Salter* (Oxalidaceae), § Sessilifoliatae.**

*Planta* parva, 3—4 cm. alta, caule breviter exserto. *Bulbi* late subuloidei, congesti, tunicis numerosis laxè obtecti: tunicae acutissimae, pilis subsetiformibus brevibus retrorsis pilosae, exteriores lineares vel lamellatae, ad basin saepe tri-diffissae, nitentes brunneae, interiores lanceolatae atro-brunneae, ad margines pallidae. *Rhizoma* ad 8 cm. longum, squamis parvis indutum. *Caulis* 1—2 cm. longus, simplex vel e basi bifurcatus, dense pubescens, inferne squamis 2—4 semiamplexicaulibus pubescentibus instructus, ad apicem foliatus. *Folia* satis numerosa, ad apicem plus minusve imbricata, inferiora saepe subsessilia,



superiora petiolata : petioli rubescentes, ad 1 cm. longi, sicut pedunculi villosi, ad basin (infra articulum) squamiformes, pubescens : foliola 3, brevissime petiolulata, linearia vel cuneata, conduplicativa vel involuta,

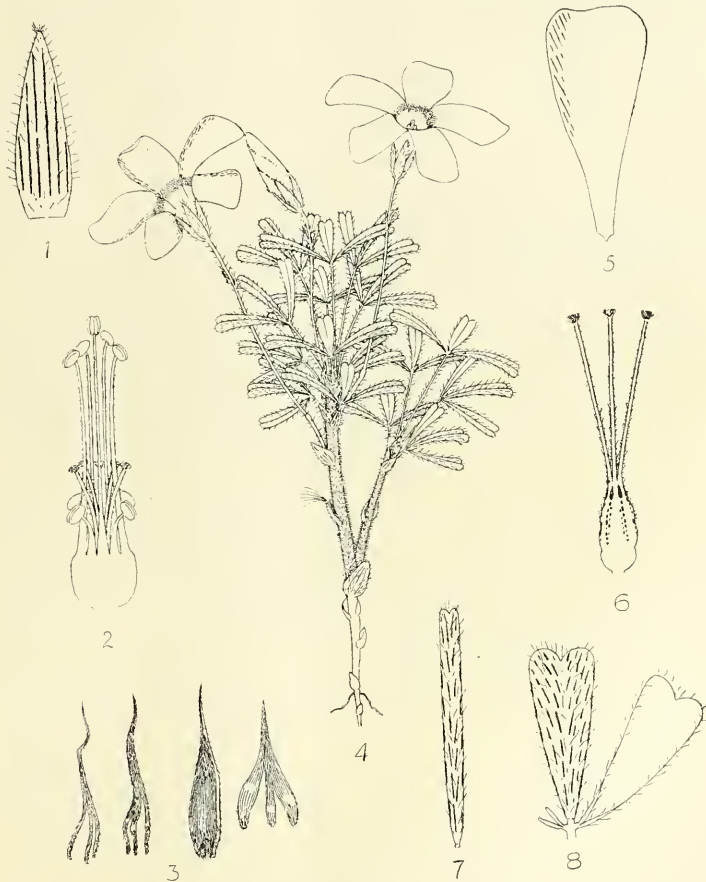


FIG. 5. *Oxalis grammophylla* Salter. 1. Sepal  $\times 8$ . 2. Androecium  $\times 8$ . 3. Bulb scales, natural size. 4. Plant  $\times 2$ . 5. Petal  $\times 3$ . 6. Gynaecium  $\times 8$ . 7. Leaflet of form  $\beta$  (dried)  $\times 2$ . 8. Leaf (dried)  $\times 4$ . (Salter 4469.) Del. T. M. Salter.

emarginata, 0.6—1.0 cm. longa, 1.5—3 mm. lata, supra glabra, infra et marginibus villosa, lineis parvis numerosis pellucidis (in sicco atris) notata. Pedunculi uniflori, e foliorum axillis exorientes, folia superantes,

1—2 cm. longi, rubescentes, in parte superiore bibracteati bracteis subulatis. 1·5—2 mm. longis, ciliatis, sicut folia lineatis. *Sepala* lanceolata, ad 5 mm. longa, sparse villosa, ciliata, lineis pellucidis (in sicco atro-brunneis) longitudinaliter striata. *Corolla* 1·1—1·5 cm. longa, lutea, tubo infundibuliforme concolore, interdum in faucibus aurantiaco-rubro-annulata: petala cuneata, ad basin leviter attenuata, antice truncata, saepe retusa, 5—8 mm. lata, ad marginem exteriorem aurantiaco-rubro-maculata et striis parvis (in sicco atris) copiose notata. *Filamenta* (parte connata inclusa) exteriora 2—3 mm. glabra, interiora 3—5·5 mm. longa, minute sparseque glandulosa, leviter gibbosa. *Ovarium* ovoideo-oblongum, ad 1·8 mm. longum, in dimidio superiore pubescens cum pilis paucis capitatis admixtis, callis numerosis rubris (in sicco atris) ornata, stylis inferne glandulosis vel pubescentibus, superne glandulosis. *Capsula* late oblonga, loculis 2—3 ovulatis.

*Forma*  $\beta$ . *Planta* major, ad 10 cm. alta, caulis parte foliata longiore. *Foliola* linearia, ad 2·2 cm. longa. *Corolla* ad 2 cm. longa, sine annulo rubro.

*Forma*  $\gamma$ . *Foliola* linearia, ad 1 cm. longa. *Corolla* semper annulata. *Stamina* (vel styli) longiora, longissima e corolla tubo breviter exserta.

*Forma*  $\delta$ . *Caulis* pars foliata vix elongata. *Folia* subapicalia: foliola parva, late cuneata etiam obovata. *Corolla* 1·5—1·8 cm. longa sine annulo rubro.

*Hab.* Cape Province: Calvinia Div.; Karamoe, in hard dry ground, flowers May—July, *Salter* 4469 (*type* in Bolus Herbarium) 1650 A (cult), 5376: *form*  $\beta$ . Clanwilliam Div.; 3 miles south-west of Langekraal, 2468, 5387; about Doornbosch, 1651 (cult) 5383: *form*  $\gamma$ , Calvinia Div.; 2 miles north of Botterkloof, 2478, 4444, 5377: *form*  $\delta$ , 7—14 miles east of Nieuwoudtville 4485, 5364, 5365.

This species is evidently widespread in the arid districts of the triangle formed by Calvinia, Nieuwoudtville and Doornbosch and it is remarkable that it has escaped notice for so long. It is exceedingly variable both in the size of the plant and in the shape of the leaves and it is undoubtedly very prone to epharmonic influences. Although more extended collecting and observation may make it possible to separate certain varieties, I have thought it advisable for the present merely to distinguish four *forms* which seem to be more or less definite mutants.

At first sight, in the wild state, it is not obvious that this species should be placed in the section Sessilifoliatae, but in cultivation, plants of the typical form and form  $\beta$  produced markedly leafy stems and axillary peduncles, the latter taking an elongate lax procumbent form, unlike *O. lincolata*, *Salter* (p. 1) in which the stem does not lengthen in cultivation.

It is an affinity of *O. Robinsonii*, Salter and Exell, differing in its rather dense villose indument, much shorter peduncles, differently shaped petals of smaller size, with orange-red markings, although some plants of form  $\beta$  (Salter 2468) approach that species in stature and leaf form. Form  $\delta$  in one instance (Salter 4485) is not unlike *O. Massoniana*, Salter, var.  $\beta$ , *flavescens* (p. 3), but the leaflets are much broader and the leaves petiolate and practically apical on the stem.

The orange-red "eye" is not constant, being always present in form  $\gamma$ , and occasionally in the typical form.

The five preceding species are closely related one to another and belong to a very distinct natural group in the genus, the characteristics of this group being as follows :—

Bulb tunics lanceolate, ligulate or linear, sharply acute at the apex, at least the outer pilose with retrorse hairs. Leaflets linear or linear-cuneate, streaked with short pellucid lines. Sepals striate with pellucid lines. *These lines become black and conspicuous in the dry plant.*

This group also includes five already known species, viz. :—

<i>O. pardalis</i> , Sond.	§ Sessilifoliatae.
<i>O. confertifolia</i> (O. Ktze) R. Knuth.	„
<i>O. Robinsonii</i> , Salter & Exell	„
<i>O. Burkei</i> , Sond.	§ Tripartitae (Lineares)
<i>O. capillacea</i> , E. Mey.	§ Multifoliolatae.

and it will be seen that, under the present artificial system of grouping, these five species are divided among three of the existing sections. Pending a complete rearrangement of the South African species in their natural relationship, with a view to simplifying identification of plants in this easily recognisable group, I append a key to the 10 species in question.

A. Leaflets 5 to 9. (Corolla red, white or yellow) .. .. *capillacea*.

AA. Leaflets 3.

B. Leaves petiolate, arising from the apex of the stem : peduncles apical, rarely axillary in the stem scales.

C. Petal more than 6 mm. wide, obovate above, tapering to a distinct narrow claw in the lower half : outer bulb scales retrorsely pilose : corolla reddish or white .. .. *Burkei*.

CC. Petal less than 4 mm. wide, cuneate, without a distinct claw : outer bulb scales retrorsely velvety : corolla white .. .. *lineolata*.

- BB. Leaves mostly sessile or subsessile (the upper sometimes petiolate), imbricating on the stem or at least the upper part: peduncles all axillary.
- D. Outer bulb scales closely plicate: leaflets somewhat glaucous: (petals rosy tipped) .. *Massoniana*.
- DD. Outer bulb scales smooth: leaflets not glaucous.
- E. Tube of the corolla shorter than the laminae: longest filaments or styles well exerted from the corolla tube: (corolla rose-red) .. .. *melanographia*.
- EE. Tube of the corolla narrower, about equalling the laminae: filaments and styles not exerted, or in *O. grammophylla*, form  $\gamma$ , very shortly exerted.
- F. Leaves all subsessile, more or less reflexed.
- G. Stout erect plants with a long ligneous leafy stem.
- H. Petals more than 7 mm. wide, obovate, tapering in the lower half to a distinct claw: corolla red .. *confertifolia*.
- HH. Petals less than 5 mm. wide, cuneate or spatulate without a distinct claw: corolla white .. .. *heidelbergensis*
- GG. Dwarf plant, with leaf-bearing upper part of the stem short: (corolla red) *pardalis*.
- FF. Upper leaves petiolate, ascending.
- I. Dwarf plant 3—4 cm. high: stem thickly pubescent or villose: peduncles and sepals villose, peduncles less than 4 cm. long: petals slightly attenuate at the base, yellow, orange-red-margined .. .. *grammophylla*
- II. Well-developed plant 6—15 cm. high: stem glabrous: peduncles and sepals very sparsely pubescent, peduncles more than 4 cm. long: petals cuneate, not attenuate at the base, white or yellow, narrowly red-margined .. .. *Robinsonii*.

***Oxalis crocea*, Salter (Oxalidaceae), § Sessilifoliatae.**

*Planta* erecta, caule exserto, plerumque ramulosa, interdum prope fruticulosa, 5—10 cm. alta. *Partes herbaceae* omnino pilis brevibus hyalinis pluricellularibus dense pilosae. *Bulbus* magnus, elongatus, tortuose ovoideo-subuloides vel obclavatus, tunicis rugosis diffidentibus, papyraceis, atrobrunneis. *Rhizoma* ad 20 cm. longum, inferne annorum praeteritorum tunicis obsitum, superne squamis semiamplexicaulibus indutum. *Caulis* ad 9 cm. longus, saepe ramulosus, ramulis 1—8, ad

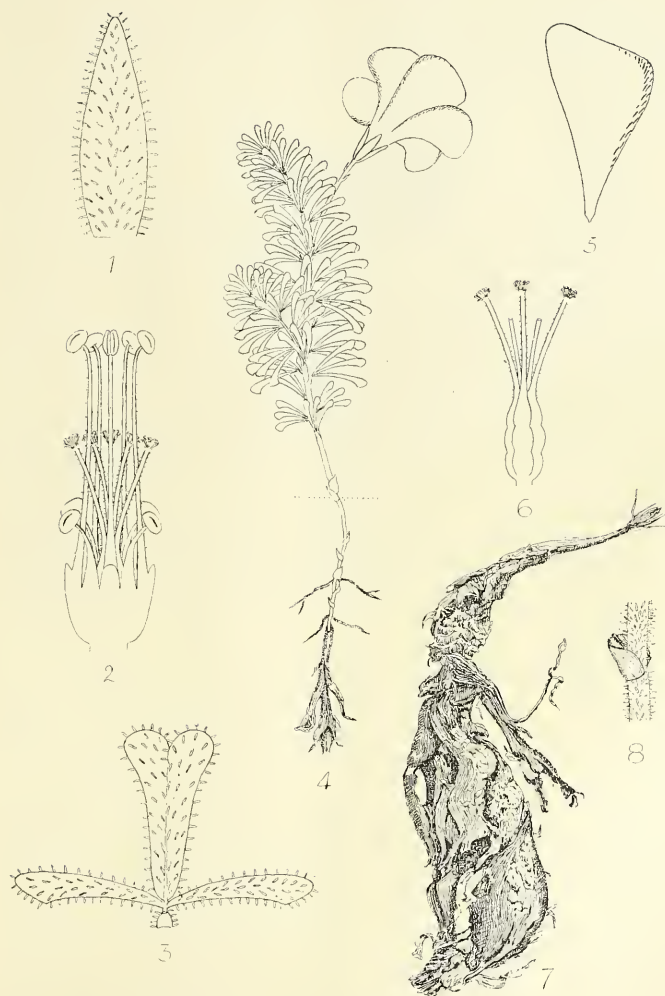


FIG. 6. *Oxalis crocea* Salter. 1. Sepal  $\times 6$ . 2. Androecium  $\times 6$ . 3. Leaf under side  $\times 3$ . 4. Plant, natural size. 5. Petal  $\times 1\frac{1}{2}$ . 6. Gynaecium  $\times 6$ . 7. Bulb, natural size. 8. Portion of stem, with bract  $\times 4$ . (Salter 5550.) Del. T. M. Salter.



3 cm. longis, ad basin extremam efoliatus, superne fere secus totum caulem ramulosque dense foliatus. *Folia* numerosa, conferta, alterna, subsessilia, petiolis squamiformibus 0.5—1.5 mm. longis: foliola 3, sessilia, cuneato-clavata, conduplicativa, leviter falcata, antice 1/5-incisa, lobis ovatis, 6—10 mm. longa, 2—4.5 mm. lata, supra glabra, minute impresso-punctata, subglaucula, infra et marginibus pilosa. *Pedunculi* 1—5, uniflori, e foliorum axillis exorientes, ad basin articulati, paulo infra calycem bibracteati bracteis subulatis alternantibus, fere 1.5 mm. longis. *Sepala* late lanceolata, 5—6.5 mm. longa, saepe subobtusata, ciliata. *Corolla* 1.8—2.2 cm. longa, laete flava, tubo infundibuliforme concolore: petala late cuneata, ad basin vix attenuata, antice obliquissime truncata, itaque triangularia, 0.9—1.1 mm. lata, ad marginem anteriorem interdum purpureo-maculata. *Filamenta* (parte connata inclusa), exteriora 3—4.5 mm. glabra, interiora 4.5—8 mm. longa, externe sparse glanduloso-pilosa, breviter obtuseque dentata. *Ovarium* oblongum, fere 2.3 mm. longum, glabrum, ecallosum, stylis glanduloso-pilosis. *Capsula* subglobosa, ad 6 mm. longa, loculis 3-ovulatis.

*Hab.* Namaqualand: 10 miles north-west of Steinkopf, on coarse gravelly slopes facing west, 30 June, 1935, Salter 5550 (*type* in Bolus Herbarium).

A very distinct species in the section Sessilifoliatae, distinguished from all others by its clavate leaflets, large elongate blackish bulbs and short, rather stout hyaline hairs in which the cell divisions become apparent in drying.

***Oxalis porphyriosiphon*, Salter (Oxalidaceae). § Sessilifoliatae.**

*Planta* erecta viscosa, caule exserto, 5—11 cm. alta. *Bulbi* ovoidei vel lato-ovoides, apice acuti, saepe congesti contortique, 1.5—2 cm. longi, tunicis adnatis viscosis atro-brunneis. *Rhizoma* breve, saepe 1—2 cm. longum, squamis parvis sparse indutum. *Partes* herbaceae pilis capitatis, saepe bicellularibus pilisque brevioribus simplicibus crispatis admixtis pilosae. *Caules* 1—3, e bulbo exorientes saepe 7 cm. longi, inferne squamis parvis late ovatis cuspidatis, superne vel fere omnino foliis alternis dense instructi. *Folia* inferiora subsessilia, superiora breve petiolata petiolis ad 3 mm. longis: foliola 3, sessilia, cuneato-obcordata, plerumque conduplicativo-falcata, 2.5—4 mm. longa, 1—2 mm. lata, supra glabra, infra sparse crispato-pubescentia, nervo medio marginibus pilis longis capitatis pilosa. *Pedunculi* 1—5, uniflori, e foliorum axillis exorientes, saepe 2—3 cm. longi, post anthesin deflexi, ebracteati vel in dimidio superiore bracteis 1 vel rare 2 induti. *Sepala* ovato-lanceolata, ad 3 mm. longa, rubescentia, interdum ad apicem nigrescentia, ecallosa. *Corolla* 2—2.3 cm. longa, praecipue in tubo viscoso-pilosa. rubro-pur-

purea, tubo anguste infundibuliforme saturate purpureo cum laminis  
aequante, in faucibus luteo-annulata: petala e basi unguiculata angus-  
tissime cuneata superne obovata, subtruncata vel leviter retusa,  
7—9.5 mm. lata, pilis capitatis ciliata. *Filamenta* (parte connata

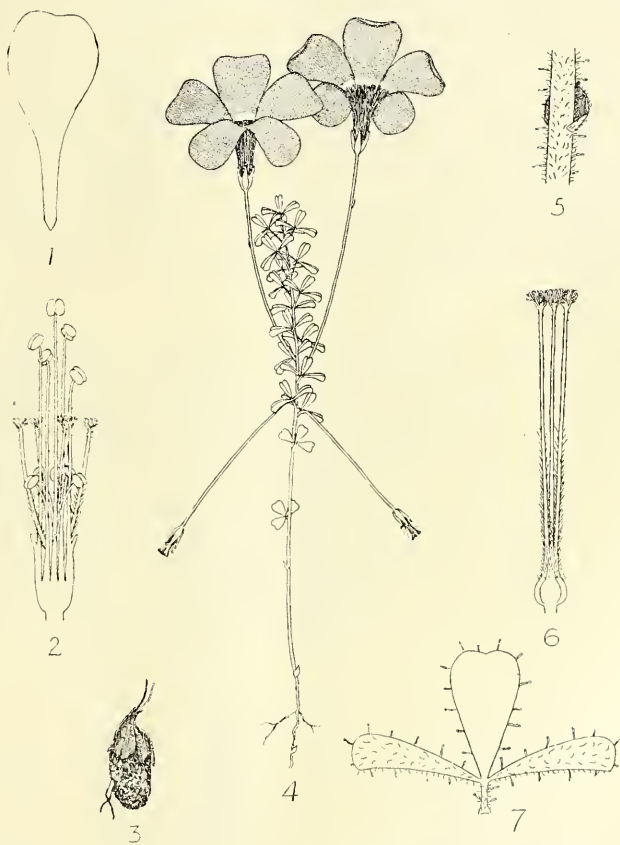


FIG. 7. *Oxalis porphyriosiphon* Salter. 1. Petal  $\times 1\frac{1}{2}$ . 2. Androecium  $\times 6$   
3. Bulb, natural size. 4. Plant, natural size. 5. Part of stem  $\times 8$ . 6. Gynae-  
cium  $\times 6$ . 7. Leaf, showing upper surface of medial leaflet  $\times 6$ . (Salter 2454.)  
Del. T. M. Salter.

inclusa) exteriora 4—6 mm., glabra, interiora 6—8.5 mm. longa, longis-  
sima valde inaequalia, sparse glandulosa, anguste dentata. *Ovarium*  
globoso-ovoideum, 1 mm. longum, superne pubescens, ecallosum, loculis

1-ovulatis, styli inferne pubescentibus, ad apicem sparsissime glandulosis.

*Hab.* Cape Province : Clanwilliam Div. ; Pakhuis Pass, about 2,800 ft., flowers May-July, *Salter* 2454 (*type* in Bolus Herbarium), 5399.

This species is remarkable for the colour of the corolla. The tube is a very deep purple and the lamina purple-red, the two colours being separated by a dull yellow ring in the throat. It is an affinity of *O. microphylla*, Schltr. ex R. Knuth and *O. Leipoldtii*, Schltr. In addition to the colour of the corolla tube, a character which seems to be unique among the South African *Oxalis*, it differs from the former in its differently shaped leaflets, sepals and petals, in the nature of the hairs on the peduncle and in the teeth on the inner filaments, which are somewhat variable in length : from the latter in having shortly petiolate upper leaves and a glandular corolla, not dilated at the throat. (v.v.s., v.v.c.)

***Oxalis senecta*, Salter (Oxalidaceae), § Tripartitae (Oblongae).**

*Planta* parva grisea, 2—4.5 cm. alta, caule non exserto, partibus herbaceis dense cano-villosis. *Bulbi* cumulati, tunicis numerosissimis papyraceis nitentibus laxè obteeti, exterioribus lanceolatis, apice attenuato-acicularibus, in dimidio inferiore diffissis, atro-brunneis, interioribus tenuissimis, pallidioribus. *Rhizoma* breve, gracile, squamis parvis semiamplexicaulibus indutum. *Folia* 9—25, basalia : petioli 1—2.5 cm. longi, ad basin (infra articulum) valde dilati, membranaceo-squamiformes : foliola 3, petiolulata, tenuia, cuneata, antice  $\frac{1}{5}$ — $\frac{1}{6}$  ineisa, plerumque conduplicativa, supra glabra vel utrinque cano-villosa (in sicco), impresso-punctata, ciliata, griseo-glaucæ, medium 4—6 mm. longum, 2.5—3.5 mm. latum, lateralia obliqua, paulo minora. *Pedunculi* uniflori, 2—3 cm. longi, ad apicem dense retrorso-villosi, paulo infra calycem bibracteati bracteis linearibus alternantibus, villosis, pallidis, ad 4 mm. longis. *Sepala* late lanceolata vel ovato-lanceolata, 4—5 mm. longa, ciliata, ecallosa. *Corolla* 1.4—1.6 cm. longa, tubo breve late infundibuliforme luteo : petala e basi breviter unguiculata late cuneato-ovovata, oblique subtruncata, infra ad marginem exteriorem dense cano-pilosa et rare purpureo-maculata. *Filamenta* (parte connata inclusa), exteriora 2.5—4.5 mm. glabra, interiora 4—7 mm. longa, minute glanduloso-pilosa, leviter gibbosa, longissima e corollae tubo satis exserta. *Ovarium* oblongum, 1.5—2 mm. longum, in dimidio superiore cano-pilosum, ecallosum, loculis circa 24-ovulatis : styli ad basin sparse pilosi, superne minute glandulosi.

*Hab.* Cape Province : Van Rhy's Dorp Div. : Knecht's Vlaagte,

12 miles north of Zout River Bridge on sandy banks of a dry watercourse, Salter 5490 (type in Bolus Herbarium) June 1935, 2510 July 1932.

Probably an affinity of *O. bella*, Knuth (*O. exigua*, Bolus f., non Phil.) and *O. Annae*, Bolus f., but a rather larger plant. It differs in having a dense coating of longish white simple hairs, longer leaflets and bulbs

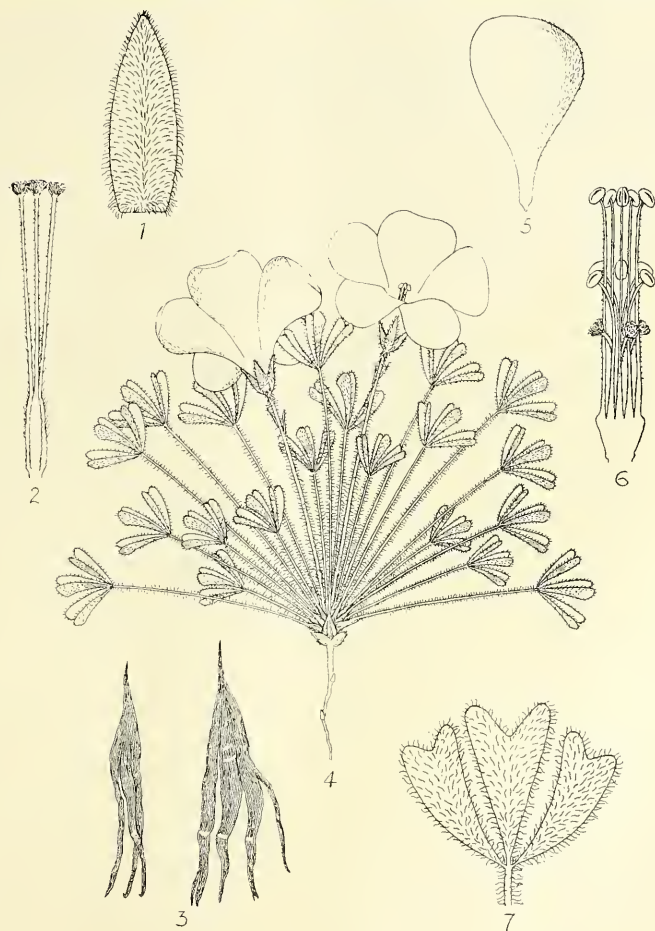


FIG. 8. *Oxalis senecta* Salter. 1. Sepal  $\times 6$ . 2. Gynaecium  $\times 6$ . 3. Bulb scales, natural size. 4. Plant  $\times 1\frac{1}{2}$ . 5. Petal  $\times 2$ . 6. Androecium  $\times 6$ . 7. Leaf  $\times 4$ . (Salter 5490.) Del. T. M. Salter.

enclosed in a dense mass of lanceolate scales which split in their lower part, similar to those of *O. minima*, Sond. The plants grow several together in tufts and the white indument overlying the greyish leaves gives them a hoary appearance. In this respect it resembles *O. densa*, N.E. Br., which is however a still smaller species with bifurcate leaflets and quite different bulbs.

It appears to be rare and it evidently lies dormant unless it receives favourable rains, for after first finding it in 1932, I was unable to discover any trace of it in the same locality during the two following seasons, but after good rains it appeared again in 1935.

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